

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MICHIGAN  
SOUTHERN DIVISION**

JUDITH A. HENDRIAN, Individually and  
as Personal Representative of the Estate of  
HOWARD G. HENDRIAN, Deceased,

Case No. 08-CV-14371

Hon. Julian Abele Cook

*Plaintiff,*

v

SAFETY-KLEEN SYSTEMS, INC.,

*Defendant.*

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**DEFENDANT SAFETY-KLEEN SYSTEMS, INC.’S  
MOTION *IN LIMINE* TO PRECLUDE THE TESTIMONY, OPINIONS AND  
REPORTS OF DR. NACHMAN BRAUTBAR**

DEFENDANT SAFETY-KLEEN SYSTEMS, INC. (hereinafter “Defendant” or “SK” ), by and through its counsel, Clark Hill, PLC and Jones Carr M<sup>c</sup>Goldrick, LLP, moves *in limine*, pursuant to Fed. R. Evid. 104, 401, 402, 403, 702 and 703, to exclude the testimony, opinions and report of Plaintiff’s expert witness Dr. Nachman Brautbar (“Brautbar”), on the grounds that his causation opinion has no basis in fact, is scientifically invalid, is unreliable, and is therefore precluded under *Daubert*, its progeny and the Federal Rules of Evidence. As such,

Brautbar's opinions are inadmissible and SK requests this Honorable Court exclude the testimony, opinions and reports of Brautbar, as well as any and all references to such materials at the trial of this matter.

In support of this Motion, SK will respectfully show the Court as follows:

1. Plaintiff Judith Hendrian ("Plaintiff") claims benzene exposure from occupational use of Safety-Kleen 105 Solvent ("SK 105") at Ford's facilities in Livonia, Michigan, caused Decedent Howard Hendrian ("Hendrian") to develop myelodysplastic syndrome ("MDS") and other related leukemic complications, including acute myelogenous leukemia ("AML").

2. Plaintiff's chemical engineer expert, Dr. Melvyn Kopstein ("Kopstein"), upon whom Brautbar relies for his causation opinion, estimated Hendrian's alleged benzene exposure from SK 105. Based on Ford employee records and coworker witness testimony in this case, Kopstein determined Hendrian's benzene exposure from SK 105 began in May 1991.

3. Brautbar wholesale relies on Kopstein's exposure assessment to opine that the level of benzene exposure according to Kopstein was sufficient to cause, and did in fact cause, Hendrian's MDS-leukemia.

4. Notably, and despite a plaintiff's burden to prove his injuries would not have occurred "but for" the defendant's conduct, Brautbar admitted he is unable to offer an opinion that Hendrian would not have developed MDS-leukemia had he not been exposed to SK 105. In fact, Brautbar conceded he could not

answer this threshold causation question without speculating.

5. Unlike Brautbar, Safety-Kleen's hematology expert, Dr. Shields, reviewed and relied upon various blood test results contained in Hendrian's medical records from the early 1990s which Plaintiffs had produced to Safety-Kleen on August 6, 2009, almost two years before Brautbar's initial July 2011 Report. Dr. Shields established Hendrian's blood showed macrocytosis as early as July 1990, and that this was evidence he already had MDS at that point, *ten months prior* to May 1991, the date Kopstein determined Hendrian first began using SK 105.

6. In response, Brautbar issued an untimely report, in which he *agreed with Dr. Shields that Hendrian's MDS was present in mid-1990*.

7. In his untimely report, Brautbar also opined, for the first time—after the expert report deadline, without any corroborating fact witness testimony, without any supporting exposure assessment, and contrary to Hendrian's start date for SK 105 usage as determined by Kopstein based on the evidence—that Hendrian's macrocytosis is a “marker of benzene exposure,” in and of itself. However, the studies Brautbar cites do not support this proposition and do not fit the facts of this case. Instead, they show that macrocytosis in a vacuum is not an indicator of benzene exposure, and that there is a constellation of blood effects resulting from high levels of benzene exposure, which Hendrian did not have. The studies Brautbar cites in this regard involve massively high exposures to benzene

bearing no relation to the alleged exposures at issue here.

8. Brautbar also claims that, because macrocytosis is allegedly a sign of contemporaneous benzene exposure, this “obviate[s] the need for proof of sufficiency of dose.” This suggestion, however, directly contravenes well-established federal law, including *Daubert* and its progeny.

9. In response to the temporal impossibility of his opinions, Brautbar also devised another new theory; namely, that Hendrian must have used SK 105 prior to 1990 (despite the lack of evidence to support such a claim, and notwithstanding the fact that the exposure expert on whom he exclusively relies, Kopstein, says exposure did not begin until May 1991). This theory is unsupported by evidence or testimony.

10. Brautbar’s opinion that benzene from SK 105 caused Hendrian’s MDS-leukemia is also rendered impossible by the latency period for MDS. Brautbar testified benzene-induced MDS has a latency period of 10-15 years, meaning the benzene exposure allegedly causing Hendrian’s MDS-leukemia occurred 10-15 years before the onset of this disease. Brautbar belatedly argues Hendrian’s MDS was present in mid-1990, therefore any alleged causative benzene exposures must have occurred no later than 1975-1980. No one, not even Plaintiff or Brautbar, claims Hendrian used SK 105 during that time period.

11. Even if Brautbar’s opinions as to specific causation had even a reliable and factual basis, which they don’t, he has impermissibly leapfrogged the

threshold general causation inquiry; namely, whether SK 105, or even similar mineral-spirits-based mixtures/solvents are even capable of causing Hendrian's MDS-leukemia. Mineral spirits are not benzene, and as a matter of law, the fact that trace or tiny amounts of benzene may be present in such mixtures does not support a conclusion that benzene *as a component of mineral spirits* can cause MDS-leukemia, or that mineral spirits have the same toxic effect as benzene. Moreover, Brautbar cites no studies which show otherwise. Nor does he cite statistically significant studies which show SK 105 or similar mineral-spirits-based mixtures are associated with a doubling of the risk of MDS (or AML). He cites no studies which show mineral spirits, mineral spirits-based-solvent mixtures, or even mixtures with similar benzene content as SK 105 are capable of causing MDS or AML, or that they caused Hendrian's disease. It is noteworthy that no regulatory body classifies mineral spirits or SK 105 as carcinogenic.

12. Even if epidemiological literature on benzene was relevant to a case involving a mineral-spirits-based solvent, Brautbar still fails to cite statistically significant studies showing benzene exposures, even at the exaggerated levels claimed by Kopstein here, result in a doubling of the risk for MDS or AML.

13. Moreover, Brautbar admitted he would be speculating if he said Hendrian would not have developed MDS-leukemia but for his use of SK 105. Under Michigan law, a products liability plaintiff must show that his harm would not have occurred "but for" the negligence of the defendant. Proof of causation

requires both cause in fact and proximate cause. Cause in fact requires that the harmful result would not have come about *but for* the negligent conduct. Cause in fact may be established by circumstantial evidence, but such proof must be subject to reasonable inferences, not mere speculation. Brautbar's opinion does not meet this threshold standard.

WHEREFORE, Safety-Kleen Systems, Inc. respectfully requests that this Honorable Court grant its Motion *in limine* and preclude any testimony, opinions and reports of Brautbar, as well as any and all references to such materials at the trial of this matter.

**CERTIFICATE OF CONFERENCE**

I hereby certify that, pursuant to E.D. Mich. L.R. 7.1(a)(1), there was a conference between counsel for the parties during which the movant explained the nature of the motion and its legal basis and requested, but did not obtain, concurrence in the relief sought.

Respectfully submitted,

JONES CARR M<sup>c</sup>GOLDRICK, L.L.P.

*/s/ Wesley S. Alost*

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Date: October 28, 2013

**UNITED STATES DISTRICT COURT  
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**DEFENDANT SAFETY-KLEEN SYSTEMS, INC.'S BRIEF IN SUPPORT OF  
ITS MOTION *IN LIMINE* TO PRECLUDE THE TESTIMONY, OPINIONS  
AND REPORTS OF DR. NACHMAN BRAUTBAR**



**STATEMENT OF THE ISSUES PRESENTED**

- I. Whether the testimony, opinions and reports of Dr. Nachman Brautbar regarding causation require preclusion for failure to satisfy the requirements governing the admissibility of expert opinion evidence set forth by Federal Rules of Evidence 702 and 703, as well as *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and its progeny?
- II. Whether the testimony, opinions, and reports of Dr. Nachman Brautbar regarding causation require preclusion as they are not based on any scientific, technical and/or specialized knowledge, do not assist the trier of fact, present a substantial risk of unfair prejudice, and improperly invade the province of the Court?
- III. Whether the testimony, opinions and reports of Dr. Nachman Brautbar are inadmissible because he relies on the exposure assessment of Dr. Melvyn Kopstein, which is inadmissible for the reasons stated in Safety-Kleen Systems, Inc.'s concurrently filed Motion *In Limine* to Exclude the Testimony, Opinions and Reports of Melvyn Kopstein, PhD?
- IV. Whether the testimony, opinions, and reports of Brautbar are inadmissible because he does not rely on any statistically significant epidemiological studies which show that mineral spirits generally, or SK 105 specifically, can cause or did cause Hendrian's disease?
- V. Whether the testimony, opinions, and reports of Brautbar are inadmissible because he does not rely on any statistically significant epidemiological studies which show that mineral spirits or SK 105 have the same toxic effect as benzene?
- VI. Whether the testimony, opinions, and reports of Brautbar are inadmissible because he does not rely on any statistically significant epidemiological studies which show that benzene, as a component of mineral spirits or SK 105, can cause or did cause Hendrian's disease?
- VII. Whether the testimony, opinions, and reports of Brautbar are inadmissible because he does not rely on any statistically significant epidemiological studies which show that benzene exposure, even in the exaggerated amounts alleged by Plaintiff's expert, can cause or did cause Hendrian's disease?

- VIII. Whether the testimony, opinions, and reports of Brautbar are inadmissible because they were rendered after the deadline for disclosure of expert reports?
- IX. Whether the testimony, opinions and reports of Dr. Nachman Brautbar are inadmissible because he opines exposures occurring after MDS was present caused Hendrian's MDS, in violation of temporality, a fundamental tenet of the causation analysis?
- X. Whether the testimony, opinions and reports of Dr. Nachman Brautbar are inadmissible because he opines exposures occurring at the time Hendrian's MDS was present caused the disease, which is scientifically impossible in light of his opinion that benzene-induced MDS has a 10-15 year latency period?
- XI. Whether the testimony, opinions and reports of Dr. Nachman Brautbar are inadmissible because he admits he would have to speculate to make the following statement: Hendrian's disease would not have developed, but for his exposure to Safety-Kleen?

### **CONTROLLING AUTHORITY**

Pursuant to E.D. Mich. L.R. 7.1(d)(2), the following is the controlling or most appropriate authority for the relief sought by Defendant:

1. Federal Rules of Evidence 702, 703
2. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993)
3. *General Elec. Co. v. Joiner*, 522 U.S. 136 (1997)
4. *Pluck v. BP Oil Pipeline Co.*, 640 F.3d 671 (6th Cir. 2011)
5. *McLean v. 988011 Ontario, Ltd.*, 224 F.3d 797 (6th Cir. 2000)
6. *Turpin v. Merrell Dow Pharms., Inc.*, 959 F.2d 1349 (6th Cir. 1992)
7. *Conde v. Velsicol Chemical Corp.*, 24 F.3d 809 (6<sup>th</sup> Cir. 1994)
8. *Henricksen v. ConocoPhillips Co.*, 605 F. Supp.2d 1142 (E.D. Wash, 2009)
9. *Allen v. Pennsylvania Engineering Corp.*, 102 F.3d 194 (5<sup>th</sup> Cir. 1996).
10. *Downs v. Perstorp Components, Inc.* 126 F.Supp.2d 1090 (E.D. Tenn, 1999).
11. *Baker v. Chevron*, 680 F.Supp.2d 865 (S.D. Ohio 2010)
12. *Adams v. Cooper Industries, Inc.*, 2007 WL 2219212 (E.D. Ky. July 30, 2007)
13. Federal Judicial Center, *Reference Manual on Scientific Evidence* 627 (3d. ed. 2011)

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## **I. INTRODUCTION AND SUMMARY OF ARGUMENT**

### **A. Plaintiff's Exposure Allegations**

Plaintiff claims benzene exposure from occupational use of SK 105 caused Hendrian to develop MDS and other leukemic complications, including AML.<sup>1</sup> Hendrian worked in various departments and buildings at the large Ford Motor Company complex in Livonia, Michigan from 1988 to 2006.<sup>2</sup>

Plaintiff's chemical engineer expert, Kopstein, upon whom Brautbar relies for his causation opinion,<sup>3</sup> estimated Hendrian's alleged benzene exposure from SK 105. Based on Ford employee records and coworker witness testimony in this case, Kopstein determined Hendrian's benzene exposure from SK 105 began in May 1991, when Hendrian first began working in the Flexible Machine Shop at Ford Motor Company's Automatic Transmission New Product Center (the "FMS Shop" at the "ATNPC").<sup>4</sup> Beginning in May 1991, Kopstein calculated Mr. Hendrian's exposure to benzene allegedly contained in SK 105 for a period of one year, all of which occurred exclusively in the FMS Shop.<sup>5</sup> Because the evidence in this case, including Ford employee documents and coworker testimony, revealed Hendrian only used SK 105 in the FMS Shop at the ATPNC, beginning in May

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<sup>1</sup> See July 12, 2011 Report of Brautbar, Exhibit A, at ¶¶ 36, 170 (analyzing specific causation for Hendrian's "MDS-leukemia").

<sup>2</sup> See Ex. A at ¶35.

<sup>3</sup> Kopstein's unreliable exposure assessment is addressed in Safety-Kleen's contemporaneously filed Motion *In Limine* to exclude Kopstein, which is incorporated herein by reference. In addition to all the reasons stated herein, Brautbar's testimony should be excluded because it is based on Kopstein's unreliable and inadmissible exposure assessment. See, e.g. *Ramsey v. Consolidated Rail Corp.*, 111 F.Supp. 2d 1030 (N.D. Ind. 2000) (excluding Brautbar's opinions because he relied on another expert's unreliable opinion.).

<sup>4</sup> See Report of Dr. Melvyn Kopstein, Exhibit B, at ¶¶ 25, 27 (discussing Hendrian's time in the FMS Shop at the ATPNC).

<sup>5</sup> See Deposition of Kopstein taken April 23, 2013, Exhibit C at 248:15-249:2.

1991, Kopstein did not assess benzene exposure attributable to SK 105 at any other Ford location.<sup>6</sup>

## **B. Safety-Kleen 105 Solvent**

SK 105 is an organic parts-washing solvent comprised of a refined petroleum distillate feedstock, commonly referred to as mineral spirits.<sup>7</sup> SK 105 is delivered to customers for use in conjunction with Safety-Kleen's parts-washing service and used, or "spent," solvent is later replaced, based upon a pre-set schedule, with fresh solvent. Mineral spirits like SK 105 contain various hydrocarbon components, of which benzene may be a naturally-occurring,<sup>8</sup> trace contaminant.<sup>9</sup> Benzene exposures potentially arising from the normal use of products with less than 0.005% benzene have not been shown to result in any adverse health effect, and there is no consistent evidence that even high dose, chronic exposure to mineral spirits, even with low levels of benzene, is toxic to the bone marrow or hematopoietic system in either experimental animals or humans.<sup>10</sup> Accordingly, no agency or scientific body classifies mineral spirits as carcinogenic.<sup>11</sup> Even gasoline is not considered carcinogenic by any organization

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<sup>6</sup> *Id.*; See also Ex. B, at ¶¶ 25, 27; footnotes 6, 7.

<sup>7</sup> See May 20, 2011 Report of James Breece, Exhibit D, at 3; see also Ex. B, at 7-8. Mineral spirits-based solvents, and Stoddard Solvent, have been widely used in industry throughout the country for many decades. See, e.g., *Dow Chem. USA v. Env'tl. Prot. Agency*, 491 F.Supp. 428, 430 (M.D. La. 1980); *Ekotek Site PRP Comm. v. Self*, 1 F.Supp.2d 1282, 1300 (D. Utah 1998); *Daniels v. Atl. Ref. Co.*, 295 F. Supp. 125, 128 (D. Del. 1968).

<sup>8</sup> Benzene, is ubiquitous. It is found in the ambient air, in gasoline and diesel exhaust, and in many household products. *Baker v. Chevron USA, Inc.*, 680 F.Supp.2d 865, 870 (S.D. Ohio 2010).

<sup>9</sup> See May 18, 2011 Report of John Spencer, attached hereto as Exhibit E, at 3; Ex. D, at 11. During the time period relevant here, the average benzene content for SK 105 was 15.7 ppm, or 0.00157%. See May 19, 2011 Report of Dr. David Pyatt, Exhibit F at 7; see also, Ex. E, at 3.

<sup>10</sup> *Id.*

<sup>11</sup> *Id.* (describing lack of regulation or description of mineral spirits as carcinogenic by Occupational Safety and Health Administration, American Conference of Governmental Industrial Hygienists, International

or regulatory agency, and it contains up to 4.9% benzene, or 49,000 ppm, (almost fifty times the 1,000ppm benzene content Kopstein alleges for SK 105, and over three thousand times the actual benzene content of SK 105 at the time period at issue here).<sup>12</sup>

### C. Brautbar's Opinions

Plaintiff's causation expert, Brautbar, formed his opinions on or about July 12, 2011, when he issued his first report (the "July 2011 Report") concluding benzene exposure from SK 105 caused Hendrian's MDS-leukemia.<sup>13</sup> At the time he first formed his opinions in July 2011, Brautbar had not considered or reviewed any of Hendrian's medical records prior to 2004.<sup>14</sup> The earliest records he had—the 2004 records—were dated *13 years after* Hendrian's alleged work with SK 105 began. At the time of Brautbar's first deposition in this case, about six months later on January 23, 2012 (the "January 2012 Deposition"), he had still not considered or reviewed any of Hendrian's pre-2004 medical records.<sup>15</sup> Notwithstanding, Brautbar testified at his January 2012 Deposition that he had everything he needed to offer his causation opinion that benzene from SK 105 caused Hendrian's MDS-leukemia.<sup>16</sup>

Brautbar wholesale relies on Kopstein's exposure assessment to opine that the level of benzene exposure according to Kopstein was sufficient to cause, and

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Agency for Research on Cancer, World Health Organization, US Environmental Protection Agency, or the Agency for Toxic Substances and Disease Registry).

<sup>12</sup> *Henrickson v. ConocoPhillips Co.*, 605 F.Supp.2d 1142, 1150-1151 (E.D. Wash. 2009).

<sup>13</sup> See Ex. A, at ¶¶ 170, 178.

<sup>14</sup> See August 15, 2013 Deposition of Brautbar, Exhibit G, at 19:24-20:11; see also Medical Records Summary attached as Exhibit 19 to Brautbar's August 15, 2013 deposition, Exhibit H.

<sup>15</sup> See Ex. G, at 19:24-20:11.

<sup>16</sup> See January 23, 2012 Deposition of Brautbar, attached as Exhibit I, at 16:9-12.

did in fact cause, Hendrian's MDS-leukemia.<sup>17</sup> Notably, and despite a plaintiff's burden to prove that his injuries would not have occurred "but for" the defendant's conduct, Brautbar admitted he is unable to offer an opinion that Hendrian would not have developed MDS-leukemia had he not been exposed to SK 105.<sup>18</sup> In fact, Brautbar conceded he could not answer this threshold causation question without speculating.<sup>19</sup>

#### **D. Brautbar's Opinions Violate Temporality**

After Brautbar had issued two reports (7/12/11 and 12/19/12), given two depositions (1/23/12 and 5/13/13), and the deadline for disclosure of expert reports had passed,<sup>20</sup> he first reviewed the 5/24/13 report of Dr. Peter Shields, Safety-Kleen's hematology expert. Unlike Brautbar, Dr. Shields reviewed and relied on various blood test results contained in Hendrian's medical records from the early 1990s<sup>21</sup> which Plaintiffs had produced to Safety-Kleen on August 6, 2009, almost two years before Brautbar's initial July 2011 Report.<sup>22</sup> Dr. Shields established that

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<sup>17</sup> See May 13, 2013 Deposition of Brautbar, Exhibit J, at 20:16-21:15; 22:14-23:17; 25:5-26:18; *see also* December 19, 2012 Report of Brautbar, Exhibit K, at 1 ("I have reviewed and studied this report of Kopstein and rely on this report in my opinions...")

<sup>18</sup> See Ex. I, at 240:16-241:22.

<sup>19</sup> *Id.*

<sup>20</sup> Under the applicable scheduling order, Exhibit L, Plaintiff's deadline for disclosure of supplemental or amended expert reports was February 22, 2013. There is nothing in Brautbar's latest report that could not have been presented to Safety-Kleen on or before this deadline. And Brautbar's newest report is not a rebuttal report, but instead "constitutes an improper attempt to correct the weaknesses and improprieties of his original reports that were previously identified..." See *Baker v. Chevron, USA, Inc.*, 680 F.Supp.2d 865, 879 (S.D. Ohio 2010).

<sup>21</sup> At least one of which contained an all-bold, all-caps directive to consult a hematologist. See 1/30/91 bloodwork, attached hereto as Exhibit M.

<sup>22</sup> See August 6, 2009 Correspondence from Plaintiff's Counsel to Safety-Kleen, enclosing medical records, attached as Exhibit N.

Hendrian in fact had evidence of MDS as early as July 1990,<sup>23</sup> *ten months prior* to May 1991, the date Kopstein determined Hendrian first began using SK 105.

As explained in the report of Dr. Shields, Hendrian's blood test results from as early as 1990 thoroughly discredit Brautbar's opinion that benzene from SK 105 caused Hendrian's MDS-leukemia.<sup>24</sup> If the disease was present no later than July 1990, it could not have been caused by exposures that first occurred later in time, or even exposures that occurred in proximity to the onset of disease given its latency period.<sup>25</sup> Even Brautbar agrees the principle of temporality is "inarguable" and "the most important" in a causation analysis—the putative cause must precede the putative effect.<sup>26</sup> Thus, any suggestion that exposures beginning in May 1991 caused a disease that was present in 1990 is logically and scientifically impossible.

#### **E. Brautbar Manufactures Evidence and Asserts New Theories**

In light of this problem, Brautbar was compelled to issue a third report after the expert report deadline had passed in an effort to try and save his causation opinions (the "July 2013 Report"). In his third report, Brautbar *agreed with Dr. Shields that Hendrian's MDS was present in mid-1990* and was "grateful to Dr. Shields" for bringing the blood tests showing macrocytosis<sup>27</sup> to his attention, blood

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<sup>23</sup> See May 24, 2013 Report of Dr. Peter Shields, attached as Exhibit O, at pgs. 46-47.

<sup>24</sup> See Ex. O, at pgs. 6-7; 43-47.

<sup>25</sup> "Latency" refers to the time between the alleged exposure to the substance at issue and the onset of the disease at issue. See, e.g. *Larson v. Johns-Manville Sales Corp.*, 427 Mich. 301, 307 (1986)(describing mesothelioma as having a latency period between exposure to asbestos and onset of disease.)

<sup>26</sup> See Ex. G, at 128:10-129:1.

<sup>27</sup> Macrocytosis, or a high MCV value, is a term used to describe red blood cells that are larger than normal.



tests contained in medical records first produced by Plaintiff's counsel in August 2009, almost four years earlier.<sup>28</sup>

In an attempt to sidestep the temporality problem, Brautbar opined for the first time—after the expert report deadline, without any corroborating fact witness testimony, without any supporting exposure assessment, and contrary to Hendrian's start date for SK 105 usage as determined by Kopstein based on the evidence—that Hendrian's macrocytosis is a “marker of benzene exposure,” in and of itself, and that this marker “obviate[s] the need for proof of sufficiency of dose.”<sup>29</sup> Even though Brautbar concedes “a ‘sufficient’ dose may be necessary to prove that leukemia is benzene-related in most cases,” he now suggests proof and sufficiency of dose is no longer necessary to support his causation opinion.<sup>30</sup> This suggestion, however, directly contravenes well-established federal law, including *Daubert* and its progeny: “Scientific knowledge of the harmful level of exposure to a chemical, plus knowledge that the plaintiff was exposed to such quantities, are *minimal facts* necessary to sustain the plaintiff's burden in a toxic tort case.”<sup>31</sup>

Moreover, even if Brautbar could reliably show that Hendrian's July 1990 blood test showing elevated MCV (macrocytosis) is a marker of benzene exposure,<sup>32</sup> which he can't, “the mere fact that plaintiffs' blood levels were

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<sup>28</sup> See July 26, 2013 Report of Brautbar, Exhibit P at 2. According to Brautbar, “Mr. Hendrian had evidence of MDS and macrocytosis in 1990, specifically as of July 11, 1990 when they were noted...I further agree with Dr. Shields that Mr. Hendrian's MDS and macrocytosis diagnosed in 2004 were present in mid-1990...”

<sup>29</sup> See Ex. P, at 9-10.

<sup>30</sup> *Id.*, at 9.

<sup>31</sup> See *Adams v. Cooper Industries, Inc.*, 2007 WL 2219212, at \*4 (Emphasis added) (quoting *Allen v. Pa. Eng'g Corp.*, 102 F.3d 194, 199 (5<sup>th</sup> Cir. 1996)), Exhibit Q.

<sup>32</sup> Even Brautbar can do no better than simply aver that “Mr. Hendrian has a marker of benzene exposure *at the time of his exposure to SK 105*,” without evidence or assessment of actual exposure to SK 105 at that time, and

allegedly elevated does not excuse the specific causation experts from their well-established duty to base their causation opinions on reliable evidence of exposure and dosage...elevated blood levels standing alone are insufficient evidence upon which to ground a specific causation opinion.”<sup>33</sup> Furthermore, Brautbar’s agreement that the “MDS and macrocytosis that Mr. Hendrian had on July 11, 1990” was “surely his first presentation of the hematologic disorder” wholly undermines his reliance on macrocytosis as a “marker of benzene exposure.” By his own admission, and as set forth in the report of Dr. Shields, macrocytosis is a marker of the presence of Hendrian’s MDS, not benzene exposure.<sup>34</sup>

If Brautbar truly believed Hendrian’s macrocytosis is a marker of contemporaneous benzene exposure, a marker so critical it obviates the need for requisite proof and sufficiency of dose, he would not have rendered his ultimate causation opinion based on medical records 13 years removed from Hendrian’s alleged exposure, and a *year-and-a-half before* ever laying eyes on his 1990 blood tests. Even putting aside all of the above fatal flaws in his new “acute benzene poisoning” theory, Hendrian’s bloodwork simply does not reflect the effects of benzene exposure *according to the very studies Brautbar himself, cites*, which involve vastly different exposures—often exposures to pure benzene—many, many

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without accounting for or ruling out any other sources of benzene exposure at that time. *See* Ex. P, at pg. 9

<sup>33</sup> *See*, 2007 WL 2219212, at \*6.

<sup>34</sup> *See* Ex. P, at pg. 3; *see also* Ex. O, at pg. 46.

hundreds of times higher than those at issue in this case, even using Kopstein's grossly inflated exposure assumptions.<sup>35</sup>

## II. PLAINTIFF'S CAUSATION BURDEN AND EXPERT TESTIMONY

A toxic tort plaintiff must prove both general causation and specific causation,<sup>36</sup> both of which involve scientific assessments that must be established through expert testimony.<sup>37</sup> "Scientific knowledge of the harmful level of exposure...plus knowledge that the plaintiff was exposed to such quantities, are minimal facts necessary to sustain the plaintiff's burden..."<sup>38</sup> The proponent of

<sup>35</sup> Pure benzene is 1,000,000 ppm benzene, which is 1,000 times higher than Kopstein's inflated assumption for the amount of benzene in SK 105, and more than 63,000 times higher than the actual benzene content of SK 105 based on real world testing. See Ex. F, at 7; see also, Ex. E, at 3; see also Ex. B, at ¶68.

<sup>36</sup> *Pluck v. BP Oil Pipeline Co.*, 640 F.3d 671, 677 (6th Cir. 2011); *Sterling v. Velsicol Chem. Corp.*, 855 F.2d 1188 (6th Cir. 1988); *Bonner v. ISP Techs. Inc.*, 259 F.3d 924, 928 (8th Cir. 2001) ("[t]o prove causation in a toxic tort case, a plaintiff must show both that the alleged toxin is capable of causing injuries like that suffered by the plaintiff in human beings subjected to the same level of exposure as the plaintiff, and that the toxin was the cause of the plaintiff's injury"); see also Federal Judicial Center, *Reference Manual on Scientific Evidence* 627 (3d. ed. 2011) (defining specific causation as "whether exposure to an agent was responsible for a given individual's disease.") As to specific causation, the plaintiff must show (1) dose-response relationship, (2) temporality, (3) absence of confounders, and (4) coherence. Dose-response refers to an exposure to the toxic substance at a level sufficient to induce the complained-of medical condition. See *Pluck*, 640 F.3d at 677; see also *Kelley v. American Heyer-Schulte Corp.*, 957 F.Supp. 873, 875 (W.D. Tex. 1997); *Hall v. Baxter Healthcare Corp.*, 947 F.Supp. 1387, 1412-1413 (D. Or. 1996). Temporality refers to the requirement that the exposure to the toxic substance is related in time to the onset of the disease, e.g. the effect did not precede the alleged exposure. *Downs v. Perstorp Components, Inc.* 126 F.Supp.2d 1090, 1095 (E.D. Tenn, 1999).

<sup>37</sup> *Pluck*, 640 F.3d at 677; *Baker*, 680 F.Supp.2d at 874; see also Fed. R. Evid. 702.

<sup>38</sup> *Nelson v. Tennessee Gas Pipeline Co.*, 243 F.3d 244, 252-53 (6th Cir. 2001) (excluding plaintiff's expert in a toxic tort case because expert made no attempt to determine the amount of exposure or whether it was sufficient to cause the illness at issue, but rather just assumed that if the chemical at issue was present near plaintiffs residences and work areas, "they must have been exposed at a level that could cause [the illnesses at issue]"; *Cowan v. Arkema, Inc.*, 2007 WL 3203249, at \*2 (E.D. Mich., 2007) (not reported in F.Supp.2d)(affirming summary judgment for Defendant where Plaintiffs' experts failed to ascertain Plaintiffs' level of exposure.), Exhibit R; see also *Mattis v. Carlon Electrical Products*, 295 F.3d 856, 860-861 (8th Cir. 2002) ("a plaintiff [must] make a threshold showing that he or she was exposed to toxic levels known to cause the type of injuries he or she suffered."); *Baker*, 680 F. Supp. 2d at 878 n.9 *aff'd sub nom. Baker v. Chevron U.S.A. Inc.*, 11-4369, 2013 WL 3968783 (6th Cir. Aug. 2, 2013) (quoting *Allen v. Pennsylvania Eng'g Corp.*, 102 F.3d 194, 199 (5th Cir.1996); see also *McClain v. Metabolife Internat'l, Inc.*, 401 F.3d 1233, 1241 (11th Cir. 2005)("[T]o carry the burden in a toxic tort case, 'a plaintiff must demonstrate the levels of exposure that are hazardous to human beings generally as well as the plaintiff's actual level of exposure to the defendant's toxic substance before he or she may recover,'"(quoting *Wright v. Willamette Indus., Inc.*, 91 F.3d 1105, 1106 (8th Cir.1996)).

expert testimony bears the burden to show it is reliable,<sup>39</sup> and Courts must act as “gatekeepers” to ensure admission of only scientifically valid testimony that does not involve speculation and is supported by facts in the record.<sup>40</sup> The *Daubert* court listed four non-exclusive factors or guideposts<sup>41</sup> a court may consider in its reliability analysis, and other courts have expounded on these factors. Additional reliability factors relevant here include:

1. Whether the expert’s opinion was developed expressly for the purpose of testifying, and thus more likely to be biased toward a particular result;<sup>42</sup>
2. Whether the expert employed the “antithesis” of scientific methodology by coming to a firm conclusion first and then doing research to support it;<sup>43</sup>
3. Whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion;<sup>44</sup>
4. Whether the expert adequately accounted for and excluded alternative explanations;<sup>45</sup>

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<sup>39</sup> *U.S. v. 87.98 Acres of Land More or Less in the County of Merced*, 530 F.3d 899, 904 (9th Cir. 2008).

<sup>40</sup> *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589-90; see also *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147-49 (1999); see also *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717 (3rd Cir. 1994) (citing *Daubert*, 509 U.S. at 595). It is inadequate to simply defer to a “battle of the experts” or resort to cross-examination to ferret out unreliable expert testimony. *Kalamazoo River Study Group v. Rockwell Int’l Corp.*, 171 F.3d 1065, 1072 (6th Cir. 1999); see also *General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997); *McLean v. 988011 Ontario, Ltd.*, 224 F.3d 797, 800 (6th Cir. 2000); *Turpin v. Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349, 1352 (6th Cir. 1992) (stating courts should take a “hard look” at the reasonableness of scientific theories in scientific cases based primarily on expert testimony).

<sup>40</sup> *Kalamazoo River*, 171 F.3d at 1072 (6th Cir. 1999).

<sup>41</sup> (1) Can the theory be tested, and has it been; (2) Has the theory been subjected to peer review and publication; (3) Is there a known or potential rate of error; and (4) Is the theory generally accepted. *Daubert*, 509 U.S. at 593-594.

<sup>42</sup> See, e.g., *Claar v. Burlington N. R.R.*, 29 F.3d 499, 502-03 (9th Cir. 1994); *Clausen v. M/V New Carissa*, 339 F.3d 1049, 1056 (9th Cir. 2003) (citing *Daubert v. Merrell Dow Pharms., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) (“*Daubert II*”)).

<sup>43</sup> See, e.g., *Claar*, 29 F.3d at 502-503; *Sorenson By and Through Dunbar v. Shaklee Corp.*, 31 F.3d 638, 649 (8th Cir. 1994).

<sup>44</sup> See, e.g., *General Elec. Co.*, 522 U.S. at 146; *Blue Dane Simmental Corp. v. American Simmental Ass’n*, 178 F.3d 1035, 1040-41 (8th Cir. 1999) (“Although Dr. Baquet utilized a method of analysis typical within his field, that method is not typically used to make statements regarding causation without considering all independent variables that could affect the conclusion.”).

<sup>45</sup> See, e.g., *Claar*, 29 F.3d at 502; *Munoz v. Orr*, 200 F.3d 291, 302 (5th Cir. 2000); *Merrell Dow Pharmaceutical, Inc. v. Havner*, 953 S.W.2d 706, 720 (Tex. 1997) (“If there are other plausible causes of the

5. Whether epidemiology, considered the best evidence of general causation in a toxic tort case, was available, was properly addressed by the expert, or was improperly ignored;<sup>46</sup> and,
6. Whether the expert has, at a minimum, demonstrated the levels of exposure to benzene, as a component of the substance at issue, that are hazardous to human beings, generally, *and* the plaintiff's [Hendrian's] actual level of exposure to the particular chemical.<sup>47</sup>

### **III. BRAUTBAR'S OPINIONS ARE INADMISSIBLE BECAUSE THEY ARE BASED ON FABRICATED EVIDENCE**

#### **A. Temporality: cause before effect**

It is axiomatic that cause must occur before effect. In the toxic tort context, the concept of temporality means the "chemical exposure must be related in time to the onset of the individual's clinical condition, e.g., the effect did not precede the alleged exposure."<sup>48</sup> In other words, "cause must precede effect or there can be no association."<sup>49</sup> At the most basic level, an expert may not put the proverbial cart before the horse.<sup>50</sup> Even Brautbar agrees this simple truth cannot be violated when making a causal determination.<sup>51</sup> The facts, and Brautbar's concession regarding the presence of MDS in July 1990, gut his opinion that benzene exposure from SK

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injury or condition that could be negated, the plaintiff must offer evidence excluding those causes with reasonable certainty.").

<sup>46</sup> See, e.g., *Norris v. Baxter Healthcare Corp.*, 397 F.3d 878, 881 (10th Cir. 2005) (citing *In re Breast Implant Litig.*, 11 F. Supp. 2d 1217, 1224 (D. Colo. 1998); *Wilson v. Merrell Dow Pharm., Inc.*, 893 F.2d 1149, 1154 (10th Cir. 1990); *Renaud v. Martin Marietta Corp.*, 749 F. Supp. 1545, 1554 (D. Colo. 1990), *aff'd*, 972 F.2d 304, 307 (10th Cir.1992)); Federal Judicial Center, *Reference Manual on Scientific Evidence* 554 (3d. ed. 2011).

<sup>47</sup> See, e.g., *Mitchell v. Gencorp Inc.*, 165 F.3d 778, 781 (10th Cir. 1999) (citing *Wright.*, 91 F.3d at 1106); *Henrickson*, 605 F.Supp.2d 1142,

<sup>48</sup> *Downs*, 126 F. Supp. 2d at 1095; see also *Amorgianos v. Nat'l R.R. Passenger Corp.*, 137 F. Supp. 2d 147, 168 (E.D.N.Y. 2001), *aff'd*, 303 F.3d 256 (2d Cir. 2002) (describing the temporality requirement, stating the determination as whether "the hypothesized cause precede[s] the effect.")

<sup>49</sup> *Chapin v. A & L Parts, Inc.*, 274 Mich. App. 122, 134 (2007) (explaining each of the Bradford-Hill Criteria used by epidemiologists to determine causation.).

<sup>50</sup> *Havner*, 953 S.W.2d at 719, FN 2 (describing the concept of temporality as "which is the cart and which the horse?")

<sup>51</sup> See Ex. G, at 128:10-129:1.

105 used in the FMS Shop at the ATNPC caused Hendrian's MDS-leukemia. Hendrian was not even present in that department or that facility until after it first opened, at the earliest, as set forth by Kopstein, who determined Hendrian first began using SK 105 in May 1991, based on the evidence.<sup>52</sup> Therefore, at the time Hendrian started using SK 105 his MDS was already present, according to Brautbar's own report, testimony, and Hendrian's medical records. In response to this temporal impossibility, Brautbar proffered a new theory; namely, that Hendrian must have used SK 105 prior to July 1990, despite the lack of evidence to support such a claim, and despite not having a requisite supporting exposure assessment from Kopstein.

**B. There is no evidence Hendrian used SK 105 prior to July 1990.**

In addition to being untimely, as described above in Section I(D), footnote 19, Brautbar's new theory that Mr. Hendrian must have used SK 105 prior to July 1990<sup>53</sup> has no factual basis. No coworker testified Hendrian used SK 105 in the machine shop at Ford's Transmission Plant and, importantly, no exposure assessment expert attributes benzene exposure from SK 105 to Hendrian's work in the machine shop at the Transmission Plant, or quantifies any such exposure.

When asked what supports his new claim that Hendrian must have been exposed to benzene from SK 105 prior to July 1990, Brautbar pointed to one

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<sup>52</sup> See Ex. B, at ¶¶25, 27, 61-65. Kopstein only assessed Hendrian's alleged exposures to benzene from SK 105, ignoring all other sources of benzene exposure, including the extensive occupational history as described in Dr. David Garabrant's report, filed May 20, 2011, Exhibit S, at 4-5.

<sup>53</sup> See Ex. P, at pg. 2.

thing:<sup>54</sup> a summary of Safety-Kleen service records, prepared for him by Plaintiff's counsel,<sup>55</sup> and produced as part of Brautbar's reliance materials for the first time in August 2013, after the close of expert discovery.<sup>56</sup> This document purports to summarize Safety-Kleen's records of service to the Transmission Plant *in 1990* (not prior to 1990), which Safety-Kleen had produced before it became clear that Plaintiff's allegations were confined to the FMS Shop at the ATNPC.

Of note, the first page of this summary makes clear that Plaintiff and her counsel similarly have no evidence of benzene exposure from SK 105 prior to July 1990, or at Ford's Transmission Plant, where Hendrian worked before the ATNPC: *"[s]ince Raph[ael Metzger]<sup>57</sup> is particularly interested in determining whether SK 105 was supplied during the first half of 1990, [i.e., before Hendrian's mid 1990 bloodwork showing the presence of MDS] these records were selected for detailed summary."*<sup>58</sup>

This summary is a non-starter and does not support Brautbar's new claim that Hendrian was exposed to benzene from SK 105 as of July 1990. First and foremost, Brautbar may not now simply presume Hendrian was exposed merely

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<sup>54</sup> Brautbar knew nothing about the facts of this case. When asked about his evidence of exposure from 1988-1990, he did not "recall," and then produced the service records summary. See Ex. G, at 29:25-30:15. He was similarly stumped when asked which parts washers Hendrian allegedly used. *Id.*, at 34:8-35:3. Brautbar went on to testify that Hendrian was a "mechanic." *Id.*, at 35:4-36:7. Hendrian was actually a journeyman machinist. See Deposition of Daniel Doak, Exhibit T, at 11:18-24. This lack of knowledge about Hendrian's alleged workplace exposures renders his opinions unreliable. See *Aurand v. Norfolk Southern Ry. Co.*, 802 F.Supp.2d 950, 961 (N.D. Ind. 2011) (excluding expert, in part, because he was not "conversant in the area of these plaintiffs' workplace chemical exposures.")

<sup>55</sup> See Ex. G, at 33:10-19.

<sup>56</sup> See Ex. G, at 43:8-44:16; see also Plaintiffs' Summary of Safety-Kleen Supply Records, Exhibit U.

<sup>57</sup> Raphael Metzger is counsel for Plaintiff.

<sup>58</sup> See Ex. U (Emphasis added).



from the presence of Safety-Kleen parts washer service at a massive<sup>59</sup> Ford facility. Without testimony or other reliable evidence that Hendrian actually worked with SK 105, this document does nothing to establish exposure. Michigan courts routinely reject toxic tort plaintiffs' attempts to presume exposure without something more than mere presence of a defendant's product at a plaintiff's workplace.<sup>60</sup>

Second, even if this service records summary did something to establish exposure to SK 105 at the Transmission Plant, which it does not, the earliest date of service shown is in January 1990.<sup>61</sup> The document does not show Safety-Kleen was present at Ford's massive complex prior to 1990 (nor is there evidence in this case, be it Safety-Kleen service records, co-worker testimony, or other evidence that Safety-Kleen provided parts washer service to Ford's Transmission Plant prior to 1990). In short, this summary does not provide any reliable or factual basis for Brautbar's new July 1990 exposure opinion. Nor does it provide evidence of pre-1990 exposure. Moreover, Brautbar cannot offer a naked causation opinion without any expert exposure assessment.<sup>62</sup>

**C. Brautbar cannot reliably opine that newly claimed SK 105 use from 1988-May 1991 caused Hendrian's MDS-leukemia without any expert assessment of the quantity of such alleged exposure**

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<sup>59</sup> See Deposition of John Fryer, taken January 12, 2012, Exhibit V, at 18:23-20:9 (describing the ATNPC building, alone, as being 1 mile long).

<sup>60</sup> See e.g., *Barlow v. John Crane-Houdaille, Inc.*, 191 Mich. App. 244, 247-248; 477 N.W.2d 133 (1991) (citing *Roberts v. Owens-Corning Fiberglas Corp.*, 726 F.Supp. 172, 174 (W.D. Mich., 1989)); see also *Henricksen*, 605 F. Supp.2d at 1161-62 (excluding plaintiff's expert's specific causation opinions because expert "did not attempt to quantify dose or even estimate Henricksen's level of exposure to benzene" and finding his opinion is "undermined by his failure to analyze or evaluate (his own or any other expert's) information pertaining to dose or the actual level of Henricksen's exposure."

<sup>61</sup> See Ex. U, at 1.

<sup>62</sup> *Id.*



Not only is Brautbar's new claim of pre-1990 exposure inadmissible because it has no reliable factual basis, it is also inadmissible because there is no supporting expert exposure assessment of SK 105 use for any period of time prior to May 1991. "Scientific knowledge of the harmful level of exposure to a chemical, plus knowledge that the plaintiff was exposed to such quantities, are minimal facts necessary to sustain the plaintiffs' burden in a toxic tort case."<sup>63</sup> Brautbar cannot simply speculate that pre-July 1990 benzene exposures must have occurred, or assume that they must have been sufficient to cause Hendrian's MDS-leukemia, without some quantification of actual levels of exposure, or at least a threshold showing that Hendrian was exposed to those levels known to cause MDS-leukemia.<sup>64</sup> Without an expert exposure assessment to support his new causation opinion, Brautbar's speculation and unsupported assumptions about Hendrian's benzene exposure in the Transmission Department from 1988-1990 are "little more than guesswork."<sup>65</sup> Unsupported speculation and subjective belief are insufficient to meet the *Daubert* standard and Rule 702's reliability requirement.<sup>66</sup>

Cornered, Brautbar may now claim he does not need an assessment of how much benzene exposure Hendrian experienced from 1988 - 1990 because,

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<sup>63</sup> *Allen v. Pennsylvania Engineering Corp.*, 102 F.3d 194, 199 (5th Cir. 1996); *see also* footnote 38.

<sup>64</sup> *Cowan*, 2007 WL 3203249; *see also Nelson*, 243 F.3d at 252-53 (excluding plaintiff's expert in a toxic tort case because the expert made no attempt to determine the amount of exposure or whether it was sufficient to cause the illness at issue, but rather just assumed that if the chemical at issue was present near plaintiffs residences and work areas, "they must have been exposed at a level that could cause [the illnesses at issue]"; *Mattis*, 295 F.3d at 860-861 ("a plaintiff [must] make a threshold showing that he or she was exposed to toxic levels known to cause the type of injuries he or she suffered.")).

<sup>65</sup> *Mitchell*, 165 F.3d at 781 (citing *Daubert*, 509 U.S. at 589). This is not the first time Brautbar would be guilty of guesswork. His opinions were excluded in *Henry v. St. Croix Alumina, LLC*, 2009 WL 982631, at \*9 (D.V.I. 2009) because he improperly presumed the plaintiff must have somehow been exposed to a high enough dosage to exceed the threshold necessary to cause illness. Exhibit W.

<sup>66</sup> *Id.*

according to him, there is “no-threshold” dose of benzene below which MDS does not occur.<sup>67</sup> First, this claim puts the proverbial cart before the horse, by assuming, *without any factual basis* or expert exposure assessment upon which he can rely, that Hendrian experienced any benzene exposure attributable to SK 105 between 1988 and July 1990 at the Transmission Plant. In addition, the “no-threshold theory” has been systematically and repeatedly rejected by courts under *Daubert* and its progeny as an unreliable theory.<sup>68</sup> Therefore, Brautbar cannot cloak his new, unsupported exposure claim with a “no-threshold” theory by now claiming he no longer needs an exposure assessment.

**D. Brautbar’s methodology is fundamentally flawed because he formed his opinion first and *then* searched for facts to support it**

Brautbar employs the antithesis of the scientific method by now trying to manufacture evidence of pre-May 1991 exposure and issuing an untimely third report proffering new supporting theories. He came to a firm conclusion first (his July 2011 opinion that benzene exposure from SK 105 caused Hendrian’s MDS-

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<sup>67</sup> See Ex. A, at ¶ 83.

<sup>68</sup> See, e.g., *Wills v. Amerada Hess Corp.*, 2002 WL 140542 (S.D.N.Y.2002), *affd*, 379 F.3d 32 (2d Cir.2004) (“Plaintiffs expert is using a controversial theory that some toxins do not follow the dose-response relationship, but that any amount of exposure causes cancer. Even though benzene and PAHs have been shown to cause some types of cancer, it is too difficult a leap to allow testimony that says any amount of exposure to these toxins caused squamous cell carcinoma of the head and neck in the Decedent.”), Exhibit X; *Sutera v. Perrier Group of Am.*, 986 F.Supp. 655, 666 (D.Mass.1997) (“[A]lthough there is evidence that one camp of scientists ... believes that a non-linear model is an appropriate basis for predicting the risks of low-level exposures to benzene, there is no scientific evidence that the linear no-safe threshold analysis is an acceptable scientific technique used by experts in determining causation in an individual instance.”); *Whiting v. Boston Edison Co.*, 891 F.Supp. 12, 24 (D.Mass.1995) (criticizing the linear no-threshold hypothesis because it has no known or potential rate of error and cannot be falsified or validated); *Johnston v. United States*, 597 F.Supp. 374, 393 (D.Kan. 1984) (noting that the linear no-threshold hypothesis is an assumption and that regulators use this model because it is more prudent to overestimate risk than to underestimate it and “just because scientists use hypotheses to describe something they really don’t know for sure does not justify a court of law in using speculative hypotheses to determine that one person has caused harm to another”); see also, *McClain*, 401 F.3d at 1242-43; *Nat’l Bank of Commerce of El Dorado v. Associated Milk Producers, Inc.*, 22 F. Supp. 2d 942, 961 (E.D. Ark. 1998), *aff’d* 191 F.3d 858, 860-61 (8th Cir. 1999); *Adams*, 2007 WL 2219212 at \*7.

leukemia) and then belatedly conducted research to support it two years later (reviewing—for the first time in July 2013—blood test results, Safety-Kleen service records, and studies related to acute benzene poisoning to save an otherwise fatally flawed causation opinion). This is an improper methodology. In *Mitchell*, the Tenth Circuit excluded two of plaintiffs’ causation experts’ opinions because they “reached their ultimate conclusions before studying the available literature.”<sup>69</sup> Instead of “reasoning from known facts to reach a conclusion,” Brautbar “turn[ed] scientific analysis on its head” by working backwards from his conclusion and then trying to find evidence and research—something—to support it.<sup>70</sup> Brautbar’s methodology is unscientific and unsound. For this reason, alone, his opinions should be excluded.

#### **IV. BRAUTBAR’S OPINIONS ARE INADMISSIBLE BECAUSE THEY ARE BASED ON NEW, UNTIMELY THEORIES THAT DO NOT HOLD WATER AND DO NOT FIT THE FACTS**

##### **A. Brautbar’s new “acute benzene poisoning” theory does not excuse him from relying on a proper exposure assessment**

After realizing his temporality problem, and in a further attempt to manufacture some evidence of exposure prior to Hendrian’s MDS which was present in July 1990, Brautbar also proffered a new “acute benzene poisoning”

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<sup>69</sup> See, e.g. *Mitchell*, 165 F.3d at 783 (citing *Sorenson*, 31 F.3d at 649 (excluding experts because their methodologies “turn[ed] scientific analysis on its head. Instead of reasoning known facts to reach a conclusion, the experts here reasoned from an end result in order to hypothesize what needed to be known but what was not.” See also *Claar*, 29 F.3d at 502-503 (“Coming to a conclusion first and then doing research to support it is the antithesis of ...[the scientific] method...Scientists whose conviction about the ultimate conclusion of their research is so firm that they are willing to aver under oath that it is correct prior to performing the necessary validating tests [may] properly be viewed by the district court as lacking the objectivity that is the hallmark of the scientific method.”); see also *Henricksen*, 605 F. Supp.2d at 1161 (noting plaintiff’s expert impermissibly reached his opinion before being provided with a “specific dose calculation.”))

<sup>70</sup> *Id.*

theory. According to Brautbar, macrocytosis (manifested by abnormally high results for Mean Corpuscular Volume, or MCV) is an indicator of contemporaneous benzene exposure, which he now says excuses him from the requirement that he rely on an exposure assessment to render a causation opinion.<sup>71</sup>

To the contrary, it is well-established that a causation expert in a toxic tort case must always support his opinion with a reliable dose assessment, even in cases where a causation expert claims changes in blood levels by themselves prove exposure.<sup>72</sup> Espousing a theory based on blood levels does not excuse Plaintiff from this requirement, and courts have rejected toxic tort plaintiffs' arguments that it does.<sup>73</sup> Brautbar may not, as a matter of law, opine that alleged use of SK 105 prior to May 1991 (the date Kopstein determined Hendrian's use of SK 105 began, and after which he quantified exposure) caused Hendrian's MDS-leukemia. Changes in blood levels are not a substitute for evidence of exposure and dosage.

**B. Hendrian's July 1990 macrocytosis indicates he had MDS at the time, not acute benzene poisoning**

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<sup>71</sup> See Ex. P, at pgs. 9-10

<sup>72</sup> See *Nelson*, 243 F.3d at 252-53 (excluding plaintiff's expert in a toxic tort case because the expert made no attempt to determine the amount of exposure or whether it was sufficient to cause the illness at issue, but rather just assumed that if the chemical at issue was present near plaintiffs residences and work areas, "they must have been exposed at a level that could cause [the illnesses at issue]"; see also *McClain*, 401 F.3d at 1241-1242; *Mitchell*, 165 F.3d at 781 ("It is well-established that a plaintiff in a toxic tort case must prove that he or she was exposed to and injured by a harmful substance manufactured by the defendant...In order to carry this burden, a plaintiff must demonstrate 'the levels of exposure that are hazardous to human beings generally as well as the plaintiff's actual level of exposure to the defendant's toxic substance before he or she may recover.'"); see also *Wintz by and through Wintz v. Northrop Corp.*, 110 F.3d 508, 513 (7th Cir. 1997); see also *Wright*, 91 F.3d at 1106; see also *Allen*, 102 F.3d at 199 ("Scientific knowledge of the harmful level of exposure to a chemical, plus knowledge that the plaintiff was exposed to such quantities, are minimal facts necessary to sustain the plaintiff's burden in a toxic tort case."))

<sup>73</sup> See *Adams*, 2007 WL 2219212, at \*6, ("the mere fact that the plaintiffs' blood levels were allegedly elevated does not excuse the specific causation experts from their well-established duty to base their causation opinions on reliable evidence of exposure and dosage.")

Even if the law allowed Brautbar to ignore the dose requirement by pointing to blood test results, which it does not, Hendrian's blood test results do not support Brautbar's claim that they are evidence of contemporaneous benzene exposure. Even Brautbar agrees macrocytosis can be caused by a number of things, in addition to benzene exposure.<sup>74</sup> Of note, Brautbar also agrees Hendrian's macrocytosis in July 1990 was his first presentation of MDS.<sup>75</sup> Yet, he now claims the very same macrocytosis finding in July 1990 is somehow an indicator of "contemporaneous benzene exposure."<sup>76</sup> Brautbar fails to reconcile this *non sequitur*, and he provides no explanation of how he ruled out every other possible cause of macrocytosis—including Hendrian's MDS—to arrive at the conclusion benzene exposure must have caused it.<sup>77</sup>

**C. Hendrian's bloodwork is not consistent with the constellation of blood changes shown in Brautbar's own studies**

Putting aside the other fatal flaws in Brautbar's claim that Hendrian's elevated MCV/macrocytosis finding in July 1990 somehow proves contemporaneous benzene exposure, the most fundamental problem is that,

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<sup>74</sup> See Ex. P, at pg. 7; see also Ex. G, at 91:4-92:17 (discussing Goldstein, *Biological and Ambient Monitoring of Benzene in the Workplace*, Journal of Occupational Medicine, October 1986, and noting macrocytosis can be caused by alcoholism, liver disease, hyperthyroidism, vitamin B12 and folic acid deficiency, and stating it can still be useful as a "confirmatory tool **in combination with other indicators** of benzene hamatotoxicity." (Emphasis added)).

<sup>75</sup> See Ex. P, at pg. 3 ("I agree with Dr. Shields that the MDS and macrocytosis that Mr. Hendrian had on July 11, 1990 'were surely his first presentation' of the hematologic disorder that was eventually diagnosed as MDS...").

<sup>76</sup> *Id.*, at 9.

<sup>77</sup> See, *Conde v. Velsicol Chemical Corp.*, 24 F.3d 809, 813 (6th Cir. 1994)(Criticizing plaintiffs' experts for claiming elevated liver enzymes are "consistent with" chlordane exposure, without ruling out other potential causes.); *Kolesar v. United Agri Products, Inc.*, 412 F.Supp.2d 686, 698 (W.D. Mich.2006) (excluding plaintiff's expert, who could do no more than opine plaintiff's symptoms were "consistent with" possible consequences of exposure to the chemical at issue, noting such opinions are not helpful to the jury under Rule 702).

according to the new studies Brautbar, himself, cites in support, elevated MCV *alone* is not enough to presume benzene exposure.<sup>78</sup> Brautbar does not cite a single study which stands for his proposition that macrocytosis alone establishes benzene exposure.<sup>79</sup> Benzene-exposed workers in these studies had a *constellation* of abnormal blood values<sup>80</sup> which, only when viewed as a whole, may indicate high level benzene exposure.<sup>81</sup>

Hendrian did not show the pattern of changes found in Brautbar's studies, and in many instances, his results actually showed the *opposite* effect. For example, many of the studies cited by Brautbar discuss lymphopenia (reduction in lymphocytes) as "a relatively early and consistent finding" in benzene-exposed individuals.<sup>82</sup> Whereas abnormally low lymphocytes may be symptomatic of high

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<sup>78</sup> Brautbar claims the elevated MCVs in 46% of workers in the Goldwater (1941) and Greenburg (1939) studies were "significant" because they showed elevated MCV in almost half of the benzene-exposed workers. See, Ex. G, at 51:12-17; 60:16-21. But the very same studies showed even *higher* percentages of benzene-exposed workers exhibited things like reduction in white blood cells (86.5%) and reduction in platelets. See Leonard J. Goldwater, MD, *Disturbances in the Blood Following Exposures to Benzol* (1940), Exhibit Y, at 413 (discussing leucopenia occurring in 86% of benzene-exposed workers), Aksoy, (1972), *Details of blood changes in 32 patients with pancytopenia associated with long-term exposure to benzene*, Exhibit Z, at 59 (discussing reduction in platelets, or thrombocytopenia, occurring in 28 of 32, or 87.5% of exposed workers). Hendrian never exhibited a reduction in platelets white blood cells during the periods at issue here. See Hendrian's bloodwork, 7/12/90, and 1/30/91, Exhibit AA and Ex. M (showing white blood cell counts in the normal range).

<sup>79</sup> See, e.g. Goldstein, *Biological and Ambient Monitoring of Benzene in the Workplace*, Exhibit BB at pg. 1053 (noting that, although macrocytosis can be an indicator of benzene exposure (as well as other things), it is used "in combination with other indicators of benzene hematotoxicity.").

<sup>80</sup> See OSHA Medical Surveillance Guidelines for Benzene, attached as Exhibit CC, at 2 ("A constellation or pattern of abnormalities in the different blood indices is of more significance than a single abnormality").

<sup>81</sup> The studies on blood effects of high level benzene exposure look at different changes in the three types of blood cell lines: red cells, white cells, and platelets. See Ex. G, at 54:5-8. Generally, the suffix "penia" means there is a decrease below the expected norm. See Ex. G, at 71:16-23; 87:21-23. Therefore, pancytopenia, a common finding in these studies, is abnormally low for all three cell lines. See Ex. G, at 95:13-16. Leucopenia is a decreased number of white blood cells, and thrombopenia, sometimes called thrombocytopenia, is a decreased number of platelets. See Ex. G, at 71:16-23; 87:21-23. It is undisputed Hendrian never had pancytopenia, leucopenia, or thrombopenia.

<sup>82</sup> See, Exhibit BB, at 1053; see also Exhibit Y, at 965 ("...exposure to benzol produces, if anything, a relative lymphopenia."); see also Exhibit DD, Greenburg, et al., *Benzene (Benzol) Poisoning in the Rotogravure Printing Industry in New York City* (1939), at 407 (describing how the exposed group has both relatively and absolutely fewer lymphocytes than the control group); see also Ex. G, at 52:4-20.



benzene exposure, Hendrian had abnormally *high* lymphocytes in July 1990. Even more problematic, Hendrian's January 1991 blood tests—which is four months before Kopstein determined SK 105 use began and six months after Brautbar's July 1990 exposure claim—confirmed Hendrian's abnormally high lymphocytes continued to trend the *wrong way*, and were even *higher* in January 1991.<sup>83</sup> Similarly, many of Brautbar's studies found reduced platelets as a common finding in those benzene-exposed individuals,<sup>84</sup> but Hendrian's platelets were *normal* in July 1990, *normal* in January 1991, and *normal* thereafter.<sup>85</sup> Furthermore, many of Brautbar's studies found benzene-exposed workers exhibit pancytopenia,<sup>86</sup> which means abnormally low numbers in *all three* cell lines: red, white, and platelets. Hendrian never had pancytopenia.<sup>87</sup> Brautbar's studies simply do not support his conclusion that Hendrian's blood levels as of July 1990 show contemporaneous benzene exposure. It is clear he cherry-picked statements from these studies<sup>88</sup> to

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<sup>83</sup> See Ex. AA and M, noting his “lymph[ocyte]s” as “high.”

<sup>84</sup> See e.g. Ex. Y, at 965 (“A reduction in the number of blood platelets was a frequent and significant finding in the group exposed to benzol.”); see also Ex. DD, at 409, 412-413 (“...a decrease in platelets is a fairly constant finding among workers exposed to benzene...”); see also Exhibit Z, at 59 (“A severe or moderate thrombocytopenia [decrease in platelets] was found in all except four patients.”); see also Erf, et al., *The Hematological Effects of Benzene (Benzol) Poisoning*, Exhibit EE at 428 (noting thrombocytopenia in exposed group); see also Ex. G, at 53:2-22; 68:21-69:4; 79:8-12; 87:17-23 (Brautbar agrees with these statements in each respective study).

<sup>85</sup> See Hendrian's blood test results, Ex. AA and M

<sup>86</sup> See, e.g. Ex. Z, at 56 (“Apart from four, in whom the platelet count was normal, all [32] had pancytopenia.”); see also Goldstein, *Hematotoxicity in Humans*, (1977), Exhibit FF, at 71 (“The classical clinical finding in benzene hematotoxicity is...pancytopenia...”); see also Ex. G, at 94:9-95:6 (Brautbar agrees with the statement, and admits he previously defined pancytopenia incorrectly).

<sup>87</sup> See Ex. AA and M.

<sup>88</sup> In addition to the fact that Hendrian's bloodwork is entirely inconsistent with the blood findings among the exposed workers in Brautbar's studies, the studies do not “fit the facts” of this case, as discussed below in Section VI.

support his new opinion that macrocytosis in July 1990 somehow proves benzene exposure from SK 105 at that same time.<sup>89</sup>

**V. BRAUTBAR'S OPINIONS ARE INADMISSIBLE BECAUSE THE RELEVANT LATENCY PERIOD MEANS CAUSATIVE BENZENE EXPOSURES, IF ANY, OCCURRED IN THE LATE 1970S.**

Inconsistent bloodwork, lack of expert exposure assessment, and lack of factual and scientific basis aside, Brautbar's causation opinion is rendered impossible by the latency period for MDS. Brautbar testified benzene-induced MDS has a latency period of 10-15 years, meaning the benzene exposure that allegedly caused Hendrian's MDS-leukemia occurred 10-15 years before onset of Hendrian's MDS.<sup>90</sup> Brautbar concedes "Hendrian's MDS and macrocytosis diagnosed in 2004 *were present in mid 1990...*"<sup>91</sup> Therefore, any alleged causative benzene exposures must have occurred no later than 1975-1980. No one, not even Plaintiff or Brautbar, claims Hendrian used SK 105 during that time period.

**VI. BRAUTBAR'S CAUSATION OPINION SHOULD BE EXCLUDED BECAUSE NO STUDIES SHOW MINERAL SPIRITS OR SK 105 CAUSES MDS-LEUKEMIA, AND NO AGENCY OR SCIENTIFIC BODY CLASSIFIES EITHER AS CARCINOGENIC**

Even if Brautbar's causation opinions employed a reliable methodology, which they do not, he cannot, as a matter of law, opine that SK 105 or similar mineral-spirits-based mixtures/solvents are capable of causing MDS or AML, or that they caused Hendrian's MDS-leukemia. Mineral spirits are not benzene, and

<sup>89</sup> See *Richardson v. Union Pacific Railroad Company*, 386 S.W.3d 77, 89 (2011), (excluding Brautbar partially because "it is apparent his literature citations...in part, are misconstrued....")

<sup>90</sup> See Ex. G, at 124:21-125:3; see also, e.g. *Larson*, 427 Mich. at 307 (describing mesothelioma as having a latency period between exposure to asbestos and onset of disease.)

<sup>91</sup> See Ex. P, at 2.



the fact that trace or tiny amounts of benzene may be present in such mixtures does not support a conclusion that benzene *as a component of mineral spirits* can cause MDS-leukemia, or that mineral spirits have the same toxic effect as benzene.<sup>92</sup> Brautbar cites no studies which show otherwise,<sup>93</sup> and, importantly, he cites no statistically significant<sup>94</sup> studies which show mineral spirits or SK 105 are associated with a doubling of the risk of MDS or AML.<sup>95</sup> He cites no studies which conclude mineral spirits, mineral spirits-based solvents, or mixtures with a similar benzene content as SK 105 are even capable of causing MDS or AML, or that they caused Hendrian's disease. And, as discussed *supra*, at Section I(B), and footnote 11, no regulatory body classifies mineral spirits or SK 105 as carcinogenic. Brautbar's causation opinion is therefore unreliable. Even if epidemiological literature on benzene was relevant to a case involving mineral

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<sup>92</sup> See *Henricksen*, 605 F.Supp.2d at 1176 (excluding plaintiffs' causation experts because "[n]one of the studies relied upon have concluded that gasoline has the same toxic effects as benzene, and none have concluded that the benzene component of gasoline is capable of *causing* AML.") (Emphasis in original). It is noteworthy the court made this statement regarding gasoline, which contains up to 4.9% benzene, or 49,000 ppm benzene. *Id.* at 1150. By comparison, even using Kopstein's erroneous and exaggerated 1,000 ppm benzene content of SK 105, gasoline contains as much as *fifty times* more benzene than SK 105. And using real world testing for the average benzene content in SK 105, gasoline contains as much as 3,000 times more benzene. See Ex. F, at 7; *see also*, Ex. E, at 3.

<sup>93</sup> Brautbar has been excluded in the past because he offered causation opinions not supported by epidemiological literature. See, e.g. *Cord v. City of Los Angeles*, 2004 WL 2189182, at \*2 (Cal.Ct. App. 2004), Exhibit GG.

<sup>94</sup> See *Baker*, 680 F.Supp.2d at 882, FN11 ("A study is considered statistically significant only when the odds ratio is expressed with a 95% confidence interval (consistently) and when that interval does not include an odds ratio of 1.0 or below.") (Internal quotations omitted).

<sup>95</sup> See, e.g. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311, 1320-21 (9<sup>th</sup> Cir. 1995) ("*Daubert II*") (explaining concept of relative risk and why a doubling of the risk is required); *Magistrini v. One Hour Martinizing Dry Cleaning*, 180 F.Supp.2d 584, 591 (D.N.J. 2002); (same) *Siharath v. Sandoz Pharmaceuticals Corp.*, 131 F.Supp.2d 1347 (N.D.Ga. 2001) (same); *Marder v. G.D. Searle & Co.*, 630 F.Supp. 1087, 1092 (D.Md.1986) ("In epidemiological terms, a two-fold increased risk is an important showing for plaintiffs to make because it is the equivalent of the required legal burden of proof-a showing of causation by the preponderance of the evidence or in other words, a probability of greater than 50%."); *aff'd*, 814 F.2d 655 (4th Cir.1987); *Cook v. United States*, 545 F.Supp. 306, 308 (N.D.Cal.1982) ("Whenever the relative risk to vaccinated person is greater than 2 times the risk to unvaccinated persons, there is a greater than 50% chance that a given GBS case among vaccinees of that latency period is attributable to vaccination, thus sustaining plaintiff's burden of proof on causation."); Federal Judicial Center, *Reference Manual on Scientific Evidence* 612-18 (3d. ed. 2011) (describing relative risk and reasoning behind requiring a doubling of the risk).

spirits,<sup>96</sup> Brautbar still cites no statistically significant studies showing benzene exposures, even at the exaggerated levels claimed by Kopstein here, result in a doubling of the risk of MDS or AML.

When relying on studies, experts must insure the studies fit the facts of the case.<sup>97</sup> For a variety of reasons, Brautbar's studies do not fit the facts, including but not limited to the fact that they involve massive exposures—often to pure benzene—resulting in airborne benzene concentrations many, magnitudes higher than the exposures here.<sup>98</sup> Studies involving workers exposed to benzene—often pure benzene—at levels many thousands of times higher than Hendrian are simply not relevant to this case or the question of causation. Brautbar's testimony and studies are not “sufficiently tied to the facts of the case that will aid the jury in resolving a factual dispute.”<sup>99</sup>

## **VII. BRAUTBAR'S OPINION IS INADMISSIBLE BECAUSE HE TESTIFIED HIS CAUSATION OPINION AMOUNTS TO SPECULATION**

<sup>96</sup> See *Anderson v. Dow Chemical Co.*, 255 Fed.Appx. 1, 4 (5th Cir. 2007) (excluding Brautbar's opinions partially because he cited studies that did not fit the facts of the case).

<sup>97</sup> See *Mitchell*, 165 F.3d at 781 (excluding experts because they improperly used literature about a different disease than the one at issue (citing *Daubert*, 509 U.S. at 591); see also *Baker*, 680 F. Supp.2d at 887 (S.D. Ohio 2010), *aff'd sub nom, Baker v. Chevron USA, Inc.* 11-4369, 2013 WL 3968783 (6<sup>th</sup> Cir. 2013) (excluding plaintiffs' expert testimony because the studies did not fit the facts of the case), Exhibit HH.

<sup>98</sup> The average benzene content for SK 105 during the relevant time was 15.7 parts per million (“ppm”). See Ex. F, at 7; see also, Ex. E, at 3. Even Kopstein's inflated estimate of benzene content (1,000 ppm) pales in comparison to the benzene content at issue in Brautbar's studies. For example, some subjects washed their hands in pure benzene (1,000,000 ppm). See e.g. Ex. EE, at 427-428. Similarly, some of the rotogravure printing workers were exposed to ink solvents containing 10-75% benzene by volume (100,000 – 750,000ppm), and to thinners containing 20-80% benzene by volume (200,000 – 800,000ppm). See Ex. DD, at 397. In contrast, the benzene content of SK 105 at the relevant time was 0.00157% (15.7ppm). See Ex. F, at 7; see also, Ex. E, at 3. Similarly, the in air benzene levels in Brautbar's studies are massively higher than even Plaintiffs allege in this case, even reaching 1,000ppm, compared to Kopstein's exaggerated claim that Hendrian experienced short-term peak exposures “as high as 13.8ppm.” See Ex. B, at ¶89; see also Ex. G, at 57:17-58:1; 78:15-18; 97:5-8.

<sup>99</sup> See *Summers v. Mo. Pac. R.R. Sys.*, 132 F.3d 599, 603 n 5 (10th Cir. 1997).

Under Michigan law, a products liability plaintiff must show that his harm would not have occurred, but for the negligence of the defendant.<sup>100</sup> Proof of causation requires both cause in fact and proximate cause.<sup>101</sup> Cause in fact requires that the harmful result would not have come about *but for* the negligent conduct.<sup>102</sup> Cause in fact may be established by circumstantial evidence, but such proof must be subject to reasonable inferences, not mere speculation.<sup>103</sup> Here, Brautbar admitted his causation opinion was speculation:

Q. In follow up to the Plaintiff's lawyer's questions, doctor, can you say is it your testimony that Mr. Hendrian would not have contracted MDS and later AML had he not been exposed to Safety-Kleen<sup>105</sup> solvent?

A. Counsel *you're asking me to speculate*.

MR. MARSDEN: I'll object to form and foundation in that question.

THE WITNESS: Are you telling me the standard of causation is but-for? You have values, significant factors in medicine in causation of cancer, so his exposure to benzene was a significant factor, substantial factor in causation of his MDS, acute myelogenous leukemia. *You want me to speculate* if you remove the benzene, I can't do that, that's not what we have here. I'm a scientist dealing with what I have.

Q. So if I'm asking you but for his exposure to Safety-Kleen, would Mr. Hendrian have fallen ill with MDS and later AML, you can't answer that question?

MR. MARSDEN: Objection, form, foundation.

THE WITNESS: I think that you have to add to that the absence of other causes, the absence of other factors, finding of trisomy 8, all these must be taken into account in analysis of this case. *I'm not going to speculate*. I can only say what I have here, what I analyzed, and that's my opinion.<sup>104</sup>

Brautbar's causation opinion should therefore be excluded as unreliable.

<sup>100</sup> *Haliw v. Sterling Hts*, 464 Mich. 297, 310; 627 N.W.2d 581 (2001), *rev'd and remanded on other grds*, 471 Mich. 700; 691 N.W.2d 753 (2005).

<sup>101</sup> *Id.*

<sup>102</sup> *Id.*, (Emphasis added).

<sup>103</sup> *Skinner v. Square D Co.*, 445 Mich. at 163-164; *Meek v. Dep't of Transportation*, 240 Mich. App. 105, 119; 610 N.W.2d 250 (2000).

<sup>104</sup> Ex. I, at 240:16-241:19.

### **VIII. CONCLUSION**

For all of the above and foregoing reasons, Brautbar's opinions fail to meet the most basic reliability and relevance standards for expert testimony under the Federal Rules of Evidence and *Daubert*. Safety-Kleen respectfully requests that, after a hearing and thorough examination of these issues, this Court grant Safety-Kleen's motion *in limine* and preclude any testimony and reports regarding Brautbar's opinions, including any mention or reference thereto, at the trial of this matter.

Respectfully submitted,

JONES CARR M<sup>c</sup>GOLDRICK, L.L.P.

/s/ Wesley S. Alost

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**ATTORNEYS FOR DEFENDANT  
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Date: October 28, 2013

**CERTIFICATE OF SERVICE**

I hereby certify that on October 28, 2013 I electronically filed the foregoing paper with the Clerk of the Court using the Court's ECF system, which will send notification of such filing to all ECF participants of record:

JONES CARR M<sup>c</sup>GOLDRICK, L.L.P.

*/s/ Wesley S. Alost*

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Wesley S. Alost